

# PUBLISHED

J. Kellermann

Berberidaceae (version 2)

Flora of South Australia, 5th edn, 2013 / Kellermann, J. (ed./s), pp.1-3

© State of South Australia through the Department of Environment, Water and Natural Resources. You may copy, distribute, display, download and otherwise freely deal with this publication for any purpose subject to the conditions that you (1) attribute the Department as the copyright owner of this publication and (2) obtain the prior written consent of the Department if you wish to modify the work, offer the publication for sale, or otherwise use it or any part of it for a commercial purpose.

Originally published at: <http://www.flora.sa.gov.au/ed5>

## PERMISSIONS

[https://www.environment.sa.gov.au/Science/Science\\_research/State\\_Herbarium/Resources/Publications/Flora\\_of\\_SA](https://www.environment.sa.gov.au/Science/Science_research/State_Herbarium/Resources/Publications/Flora_of_SA)

**Copyright statement/permission found on the back page of the following:**

Cover: Flora of South Australia, 5th edition

[https://www.environment.sa.gov.au/files/sharedassets/public/state\\_herbarium/flora-sa-cover-june-2016-gen.pdf](https://www.environment.sa.gov.au/files/sharedassets/public/state_herbarium/flora-sa-cover-june-2016-gen.pdf)

**8 October 2018**

<http://hdl.handle.net/2440/114761>



# Flora of South Australia

5th Edition | Edited by Jürgen Kellermann

## BERBERIDACEAE<sup>1</sup>

J.Kellermann<sup>2</sup>

Shrubs, small trees or herbs (not in S.A.); leaves deciduous or evergreen, alternate, radical or cauline, simple or divided or modified into spines; stipules absent or reduced. **Inflorescence** paniculate, cymose, racemose, spicate or flowers solitary, bracteate; flowers regular, perianth in 2–3 whorls of 4–6 parts; outer whorl(s) sepal-like, inner whorl petal-like with nectariferous sacs or scales, sometimes nectaries absent; stamens as many or twice as many as petals, filaments sometimes absent; ovary superior, carpel 1, locule 1 with 1–several ovules, style short or absent and stigma sessile. **Fruit** a berry, capsule or papery bladder; seeds sometimes arillate.

A family of 12–16 genera and about 650 species, the herbaceous species distributed in northern America and Eurasia; shrubby species occur in the same area and extend into S America, E Africa, the Caribbean and Malesia. In Australia 2 genera and 6 species are naturalised. The family includes many ornamental plants, and the species in Australia are all presumed to have escaped from cultivation.

Spencer (1997) and Morley & Wilson (2007) have *Berberis* and *Mahonia* as distinct genera, but this division is not always recognised as there is a large number of species with characters from both genera. Many authors include *Mahonia* in an enlarged *Berberis* (e.g. Whittimore 1997). Phylogenetic analyses (Kim *et al.* 2004) support the merger and this is also accepted in this treatment.

References: Morley & Wilson (2007); Whittimore (1997).

### 1. BERBERIS L.

*Sp. Pl.* 1: 330 (1753); *Gen. Pl.* (ed. 5) 153 (1754).

(The name is derived from *berberys*, the Arabic name for the fruit.)

*Mahonia* Nutt., *Gen. N. Amer. Pl.* 1: 211 (1818), *nom. cons.*

Shrubs or small trees, wood and inner bark yellow; leaves evergreen or deciduous, alternate, simple or pinnate; normal leaves in fascicles on short axillary spurs; modified leaves develop into tripartite spines on long shoots, or spines absent. **Inflorescence** usually terminal on lateral shoots, racemose, fascicles or flowers solitary; perianth yellow, subtended by 2–3 bracts; sepals 6; petals 6 often smaller than sepals, each with 2 nectary glands at base; stamens 6; ovary with 1–many ovules; stigma sessile or with a short style. **Fruit** red, purple-red, pruinose or black; seeds 1–several. **Barberries**.

The genus is native to North and South America, Europe, Asia, Malesia and northern Africa. There are several hundred species of *Berberis*, but the exact number is unknown; about 5 species are naturalised in Australia.

<sup>1</sup> This work can be cited as: Kellermann, J. (2013). Berberidaceae (version 2). In: Kellermann, J. (ed.), *Flora of South Australia* (ed. 5). 3 pp. (State Herbarium of South Australia: Adelaide). flora.sa.gov.au/ed5

<sup>2</sup> State Herbarium of South Australia, PO Box 2732, Kent Town SA 5071, Australia.

© Department of Environment, Water and Natural Resources, Government of South Australia. ISBN 978-1-922027-37-5 (PDF). Publication date: 31 Oct. 2013.



Government  
of South Australia

Department of Environment,  
Water and Natural Resources

1. Leaves pinnate; branches spineless ..... 1. **B. aquifolium**
- 1: Leaves simple; branches spiny
  2. Leaf margin spiny-toothed, upper surface green; evergreen ..... 2. **B. darwinii**
  - 2: Leaf margins entire, upper surface dark purple; deciduous ..... 3. **B. thunbergii** var. **atropurpurea**

1. \***Berberis aquifolium** Pursh, *Fl. Amer. Sept.* 1: 219, pl. 4 (1814). — *Mahonia aquifolium* (Pursh) Nutt., *Gen. N. Amer. Pl.* 1: 212 (1818). — **Illustr.:** *Fl. N. America* 3: 285 (1997).

Deciduous shrub to 2 m, stems spineless, bark grey-brown, suckering underground; leaves compound, to 30 cm long, leaflets 5–9 (–11), obliquely ovate, to 10 × 5 cm, base obtuse or truncate, margin with 15–35 spines, glossy above, pale and dull below. **Flowers** yellow; pedicel to 10 mm long. **Fruit** globose, c. 6 mm long, dark blue, pruinose; stigma sessile, persistent. **Oregon grape.**

S.A.: \*NL, \*SL, \*N.S.W.; \*Vic. Native to the west coast of North America. Flowers: Sep.

2. \***Berberis darwinii** Hook., *Icon. Pl.* 7: t. 672 (1844). — **Illustr.:** *Fl. N.S.W.* 1: 168 (1990), as *B. aristata*; *Fl. Victoria* 3: 65, fig. 14A–D (1996); Heywood et al., *Fl. Pl. Fam. World* 60, fig. 1A–B (2007).

Evergreen spinose shrub to 3.5 m; branchlets subterete, red-brown, shortly pilose; leaf simple, lamina obovate to ovate-oblong, 1–2 × 0.5–1.2 cm, base cuneate, margin ± spiny-toothed, 3-spined at apex, thick, glossy darkgreen above, paler green below; spines slender, 3–5-partite, 3–7 mm long. **Flowers** golden, flushed with red; pedicel 6–10 mm long, red. **Fruit** globose, c. 7 mm long, dark blue, pruinosa when ripe; style 4 mm long, persistent. **Darwin's barberry.**

S.A.: ?\*SL; N.S.W.; \*Vic.; \*Tas. Native to southern South America; cultivated and naturalised in many countries. Questionably naturalised in S.A. Flowers: Jan. (1 specimen); Sep.–Nov. in other states (Walsh 1996).

3. \***Berberis thunbergii** DC., *Syst. Nat.* 2: 9 (1821), var. **atropurpurea** Chenault, *Rev. Hort.* 98: 307 (1926).

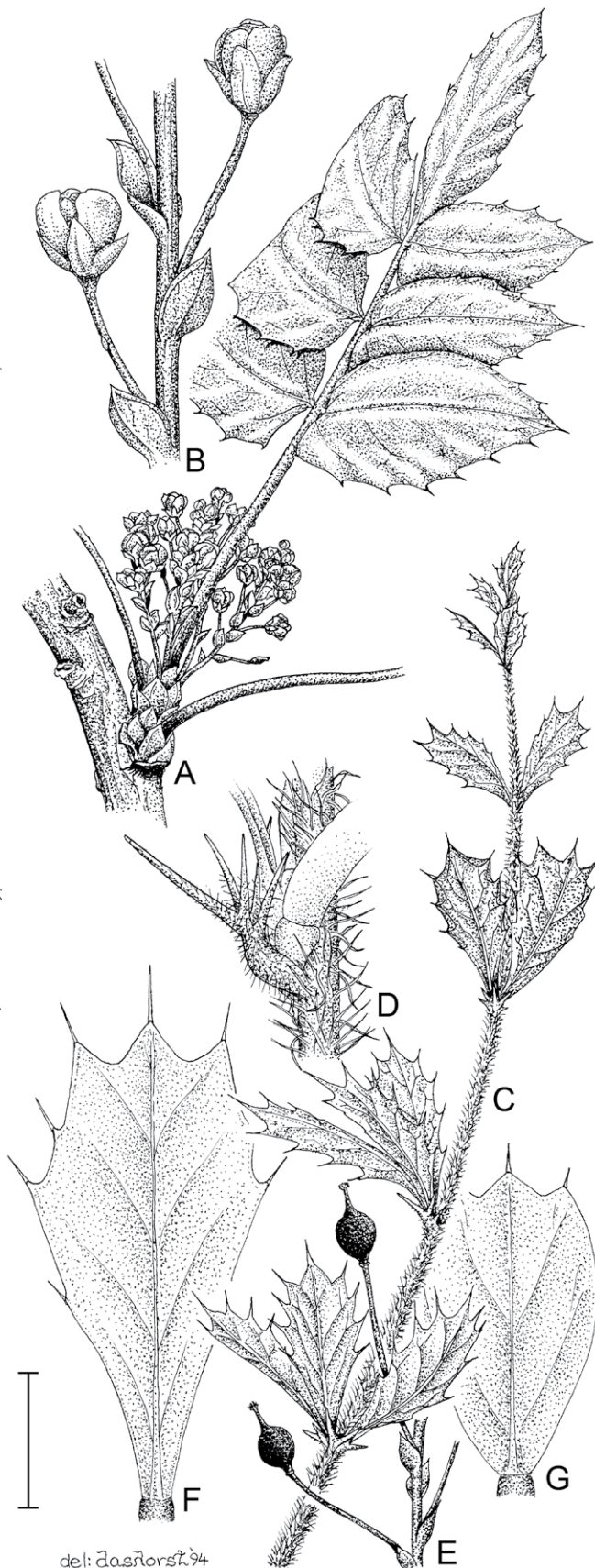
Deciduous spinose shrub to 2 m; young shoots green, glabrous, maturing dark red; leaves simple, ± ovate, 18–40 (–55) × 12–21 mm, base long-attenuate, margins entire, apex rounded, thin and flexible, above dark purple, dull, below grey-green; spines simple or 3-fid, 0.5–1.1 cm long. **Flowers** yellow; pedicel 5–9 mm long, red. **Berries** ellipsoid, 7–8 mm long, red, shiny; style not persistent. **Japanese barberry, red barberry. Pl. 1.**

S.A.: ?\*SL; \*N.S.W. Native to Japan; this variety described from plants in cultivation in France (first raised in 1913). Only 1 record known from S.A. The species is sparingly naturalised in N.S.W., however, the taxon is not determined to variety-level in the *New South Wales Flora Online* (Wieczek 2013). Flowers: late winter–spring.

Leaves of the cultivated var. *atropurpurea* seem to be larger than in the typical variety, which are reported as being 10–35 mm long (Ohwi 1965). As only limited material was available, the description is largely based on Spencer (1997) and Whittemore (1997).

## References

- Kim, Y.-D., Kim, S.-H., Landrum, L.R. (2004). Taxonomic and phytogeographic implications from ITS phylogeny in *Berberis* (Berberidaceae). *J. Pl. Res.* 117: 175–182
- Morley, B.D. & Wilson, A.J.G. (2007). Berberidaceae. In: Wilson, A.J.G. (ed.), *Flora of Australia* 2: 357–362. (ABRS: Canberra; CSIRO Publishing: Melbourne)
- Ohwi, J. (1965). Berberidaceae, Megi Ka, Barberry Family. In: *Flora of Japan (in English)*, pp. 461–465. (Smithsonian Institution: Washington)
- Spencer, R. (1997). Berberidaceae. In: *Horticultural Flora of south-eastern Australia* 2: 70–74. (University of New South Wales Press: Sydney)
- Walsh, N.G. (1996). Berberidaceae. In: Walsh, N.G. & Entwistle, T.J. (eds), *Flora of Victoria* 3: 64. (Inkata Press: Port Melbourne)
- Whittemore, A.T. (1997). *Berberis*. In: Flora of North America Editorial Committee, *Flora of North America: north of Mexico* 3: 276–286. (Oxford University Press: New York, Oxford)
- Wiecek, B.M. (2013). New South Wales flora online: *Berberis thunbergii*. In: The Royal Botanic Gardens and Domain Trust, *PlantNet: the plant information network system*. <http://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Berberis~thunbergii> [accessed: 25 Sep. 2013]



**Fig. 1. A–B. *Berberis aquifolium*:** A, flowering shoot; B, inflorescence bracts and bracteoles. **C–F. *B. darwinii*:** C, leafy shoot; D, axillary spur; E, fruits; F–G, leaves. Illustration by G.R.M.Dashorst, reproduced with permission from Morley & Wilson, *Flora of Australia* 2: 360, Fig. 68C–D, E–H (2007).



**Pl. 1. *Berberis thunbergii* var. *atropurpurea*:** flowering branch. Plant cultivated in Poland. Photo by Jerzy Opióła from Wikimedia.org.